



Ely Energy Center Environmental Impact Statement



PROJECT DESCRIPTION

Overview

Nevada Power Company, in conjunction with Sierra Pacific Power Company (the Companies), have applied to the Public Utility Commission of Nevada (PUCN) for approval to expand their existing generation portfolio by developing technologically advanced, coal-fired generation units near Ely, White Pine County, Nevada (Figure 1, sheet 1 of 2). The plants would be efficient and environmentally compliant, increase the Companies' fuel diversity, allow renewable resources to be shared across the state, and further reduce dependence upon variable purchased power markets. In addition to the generation resources, the Companies are seeking permission to develop a major transmission line from northeast Nevada to the Las Vegas area, and to interconnect the electrical systems of Nevada Power Company (NPC) and Sierra Pacific Power Company (SPPC), allowing the two utilities to share resources and increase the diversity of power supply options (Figure 1, sheets 1 and 2). These facilities would be located primarily on federal land administered by the U.S. Bureau of Land Management's (BLM) Ely, Elko, and Las Vegas Field Offices. The BLM decision would initially consist of granting rights-of-way for the subject federal property followed by disposal (sale) of certain lands.

Project Components

The proposed Project would include a power generation station to be known as the Ely Energy Center (EEC). The EEC would be comprised of multiple components to facilitate power generation, transmission, and communication:

Ely Energy Center Generating Station

Phase 1 of the EEC would consist of two coal-fired 750-MW supercritical steam turbine units with commercial operation dates of December 2011 and June 2013, respectively. This Project would take advantage of the relatively stable economics of utilizing coal compared to the volatile price of competing fuels, as well as recent technological advances in efficient unit designs and environmental controls. Phase 2 would consist of two additional 500-MW integrated gasification combined cycle (IGCC) units or another energy-efficient technology option that would be built when the technology is determined to be commercially viable. When fully built-out, the EEC would be capable of producing 2,500 MW of generating capacity.

Transmission Facilities

Two new 500kV electric transmission lines, each line 270 to 315 miles in length, would interconnect the EEC with the SPPC and NPC electric systems in northern and southern Nevada, allowing the power generated by the EEC to be efficiently transported throughout the state. The specific facilities would include two new 500-kV transmission lines, expansion of the existing 500-kV Harry Allen Switching Station, one new 500-kV switching station at the EEC, and one new 500/345-kV switching station at a proposed new substation, to be known as Robinson Summit. Interconnection of the two electric systems would support the objective of the Nevada Public Utility Commission to connect the electric systems within the state for the first time. The electric transmission lines would include extra capacity for power generated by renewable resources, and would allow that power to be efficiently transported to demand centers for Nevada consumers.

Telecommunication Facilities

The proposed telecommunication facilities that would allow the Companies to communicate with the EEC and the electrical transmission facilities would include:

- EEC - Robinson Summit fiber optic telecommunication lines
- Robinson Summit – Harry Allen fiber optic telecommunication lines
- Electric distribution facilities required to provide power to fiber optic telecommunication facilities

Project Location

Sites for coal-fired generation have been considered in the White Pine County, Nevada area for many years. Sites selected for evaluation for this Project were based on a statewide evaluation of potential sites prepared by Lockwood-Greene (2003). This study concluded that sites evaluated for coal-fired electric generation in White Pine County would be preferred, considering a variety of engineering, environmental, and economic criteria. The Lockwood-Greene study was followed by a Burns & McDonnell (2006) constraint study that identified three potential sites in White Pine County, two in the Steptoe Valley and one in Butte Valley. These sites were compared using a number of specific engineering and natural resource constraints. The South Steptoe Valley electric generation site was identified as the preferred site for development, and the North Steptoe Valley site was selected as the best alternative. The Butte Valley site was eliminated.

Site Requirements

The total land area needed for the EEC generating station site would be approximately 3,000 acres, which includes approximately 1,000 acres for the combustion by-product storage. The preliminary layout includes (2) 750-MW supercritical pulverized coal-fired units for Phase 1, as well as the (2) 500-MW units proposed for Phase 2. Included within the layout are the steam boilers and steam turbines, emissions control equipment, a fuel handling system, an on-site rail loop and rotary dumper for coal unloading, a long-term coal pile, coal storage domes, a water treatment building, mechanical draft cooling towers, air-cooled condensers, evaporation ponds for zero liquid discharge, a water reservoir and storage tank, combustion by-product storage, plant switching station, maintenance and warehouse facilities, and office and administrative buildings.

Transportation

Railways

The fuel for the EEC, primarily low-sulfur Powder River Basin coal from Wyoming, and other major commodities would be delivered to the generation site via rail to the Union Pacific mainline, then southward approximately 100 miles by one of two “shortline” alternatives. The preferred shortline rail alternative would use the existing Nevada Northern Railway (NNRy) with a rail lead constructed within the existing NNRy right-of-way to the generation site. Originally built by the Nevada Consolidated Copper Company in 1905, the NNRy line extends approximately 150 miles from the Cobre Junction near Wells, Nevada to Ely, Nevada. The NNRy also intersects the Union Pacific Railroad (UPRR) approximately 20 miles south of Cobre at Shafter, continues south to Ely, and terminates at the copper mines at Ruth. After numerous closures and reopening of the copper mines beginning in 1979, commercial use of the rail line ceased in the late 1990’s. Other than a 20-mile section near Ely that is maintained for operation of historic steam locomotives, the NNRy has fallen into disrepair, and is no longer safe for commercial traffic. The City of Ely and the White Pine Historic Railroad Foundation currently own the NNRy, and intend to rehabilitate the track to support economic development in the area. The Companies are supporting the City/Foundation in the permitting, design, and physical rehabilitation of the rail line under a Joint Development Agreement. In addition to reopening the rail gateway to Ely, rehabilitation of the NNRy will allow the Companies to bring large construction

equipment and heavy plant components to the EEC site by rail, rather than transporting on specially wheeled vehicles over public highways.

A secondary alternative for a rail line to the EEC consists of a separate right-of-way and construction of a new rail spur from the UPRR mainline near Shafter, approximately 100 miles in length, and a rail lead into the selected generation site. This alternative approach would be selected in the event that the NNRy railroad is not available for the Project.

Access Roads

Vehicular access to the EEC would be provided by existing U.S. Highway 93. The U.S. Highway 93 alignment is adjacent to both of the sites being evaluated for the EEC. Access roadways to EEC facilities would be developed off of U.S. Highway 93. Permanent and temporary access to the other components of the Project will be identified and included in the NEPA analysis.

Water Supply

The EEC would be designed to use approximately 8,000 acre-ft of water annually for the (2) 750-MW units constructed under Phase 1, with a peak flow rate for both units of approximately 15,000 gallons per minute (gpm). The proposed electric generation facility would significantly reduce water consumption by utilizing a hybrid cooling system that combines conventional wet cooling towers operating in parallel with either air-cooled condensers or some other dry-cooled technology. It is expected that the hybrid cooling system would reduce plant consumption of water by 50% or more. It is assumed that Phase 2 may require up to an additional 8,000 acre-ft of water annually, for a total EEC water requirement of approximately 16,000 acre-ft annually at full build-out.

The following water sources have been identified and will be evaluated: (1) groundwater from southern Butte Valley, (2) surface water from the Duck Creek impoundment near Duck Creek Road, or (3) groundwater from the area near Lages Station (Figure 1, sheet 1 of 2). Several other potential water supplies could be identified, but are not being considered at this time. The Companies have cooperatively filed applications with the State Engineer's Office to evaluate and obtain groundwater appropriations.

Socio-Economics

There would be a workforce peaking at approximately 1,200-1,500 persons during construction of Phase 1 of the EEC, which is currently scheduled between the Fall of 2008 through 2011. A direct workforce of about 150 full-time jobs at the EEC would be created by the end of Phase 1, increasing to 250 full-time jobs by the end of Phase 2. Additional direct employment is anticipated through the expected "multiplier effect", wherein additional employment opportunities are created for EEC service and support functions in the local and regional economy. Introduction of such large increases in workforce would present challenges to the City of Ely and White Pine County, which would be identified through the planning process and mitigative measures developed to the satisfaction of these local governments.

Air Quality / Air Emissions

The air emissions from the EEC would be minimized as a result of a high efficiency "supercritical" boiler design, utilization of advanced air quality control systems, and a fuel supply based on low-sulfur Powder River Basin or similar Western coals. The proposed air pollution control equipment includes a high-efficiency wet-limestone flue gas desulfurization (FGD) system for control of sulfur dioxide (SO₂) and condensable particulate including sulfuric acid mist. A selective catalytic reduction (SCR) system would be combined with low nitrogen oxide (NO_x) burners to reduce the NO_x emissions. A fabric filter would be used to control emissions of both particulate matter (PM) and filterable particulate matter smaller than 10 microns (PM₁₀). Carbon monoxide (CO) would be controlled using good combustion

practices. Mercury emissions would be inherently low from this type of system burning western U.S. coal. Fugitive dust from the power plant site would be controlled.

Preliminary Resources Issues

The BLM will prepare an Environmental Impact Statement (EIS) for this proposal. The EIS will address Project-induced impacts related to the following natural and human resources (not necessarily in order of importance):

- Water (including surface and groundwater; wetlands; floodplains; and riparian communities.)
- Geology and Minerals
- Paleontology
- Soils
- Vegetation
- Wildlife Species and Habitat
- Special Status Species (Threatened, Endangered, and Sensitive plants and animals)
- Range Resources
- Land Use and Access
- Recreation/Wilderness
- Air Quality
- Aesthetics (noise and visual)
- Social and Economic Values
- Environmental Justice
- Cultural Resources and Historic Properties
- Native American Religious Concerns
- Traditional Cultural Properties
- Indian Trust Responsibilities
- Hazardous and Solid Waste Materials
- Reclamation
- Noxious Weeds
- Wild Horses
- Cumulative Impacts

Staying Informed and Involved

Information notices will be printed in the local newspapers and released to other news media informing the public of comment periods associated with scoping this Project and the release of the Draft EIS and Final EIS. Date, time, and location of these public meetings/open houses will be published in area newspapers.

The BLM will also develop a mailing list for this Project. Those persons and agencies on the mailing list will be contacted from time to time during the Project to provide status updates on the Project and distribute copies of the EIS. Persons wishing to be included in the mailing list may contact the Project contacts shown below.

How to Comment

Persons wishing to comment on this proposal may do so by sending comments to the following address:

Doris Metcalf
Bureau of Land Management
Ely Field Office
HC 33 Box 33500
Ely, Nevada 89301
Attn: EEC EIS

Tel: (775)289-1852

Persons having any questions about this project may contact the following persons:

Joe Incardine, BLM, (801) 539-4118, email: Joe_Incardine@blm.gov
Doris Metcalf, BLM, (775) 289-1852, email: Doris_Metcalf@blm.gov